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| 10/828,784 | 04/21/2004 | Donald M. Connelly JR. | SJO920030101US1 | 5055 |
| 45216 | 7590 | 07/20/2005 | EXAMINER | |
| KUNZLER & ASSOCIATES 8 EAST BROADWAY SUITE 600 SALT LAKE CITY, UT 84111 | | | BROUSSARD, COREY M | |
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| | | | 2835 | |

DATE MAILED: 07/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|---------------------------------------|--|--|
| Office Action Summary | Application No. 10/828,784 | Applicant(s) CONNELLY ET AL. | |
| | Examiner Corey M. Broussard | Art Unit 2835 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 May 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-11 and 13-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-11 and 13-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 May 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claim 14 is objected to because of the following informalities: Claim 14 is a duplicate of claim 13. Appropriate correction is required.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1, 3-6, 8, 9, 11, 13, 14, 16, 21, 24, 25, and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by Pavol (PN 6,445,587). With respect to claim 1, Pavol teaches an enclosure chassis (104); a mounting surface (interior surface of mounting bay 108 outer surface of 128) oriented vertically (the side walls of the bay are oriented vertically, see Fig. 3) and coupled to the enclosure chassis to form one wall of a drive bay (108), the mounting surface configured to receive a horizontally oriented storage device carrier (106, the top and bottom of the carrier are oriented with the horizon, see Fig. 3), the mounting surface having a first layer (128) and a second layer (130, 132); a viscoelastic layer (126) disposed between the first layer and the second layer to reduce vibration

propagation throughout the mounting surface; and a receiver (the layer 128 is to receive the carrier 106, col 2, 24-27) secured to the mounting surface.

2. With respect to claim 4, Pavol teaches a second receiver (external portion of layer 128) secured to the mounting surface, the second receiver configured to retain a second storage device carrier (each rack or row of bays has multiple mounting surfaces to accommodate multiple carriers, see the embodiment drawn to Fig. 1 where the carrier contacts the mounting surface on two sides and each row accommodates multiple carriers and therefore multiple receivers).

3. With respect to claim 6, Pavol teaches the mounting surface (interior surface of mounting bay 108) is disposed to receive the first storage device carrier (106) on one side of the mounting surface and the second storage device carrier on a same side of the mounting surface as the first storage device (see Fig. 1, the mounting surfaces of the same row are on the same side).

4. With respect to claim 9, Pavol teaches an enclosure chassis (100); a mounting surface (interior surface of mounting bay 108 outer surface of 128) oriented vertically (the side walls of the bay are oriented vertically, see Fig. 3) and coupled to the enclosure chassis to form one wall of a drive bay (108), the mounting surface having a first layer (128) and a second layer (130, 132); a viscoelastic layer (126) disposed between the first layer and the second layer to reduce vibration propagation throughout the mounting surface; a first and second storage device carrier (106) configured to retain a storage device therein; and a first and second receiver (portion of the surface of 128 that receives and maintains the carrier 106) secured to the mounting surface, the receivers

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configured to receive and retain the storage device carriers substantially perpendicular to the mounting surface (see Fig. 1, 3, the carriers extend in a direction perpendicular from the surface of 128).

5. With respect to claims 3 and 11, Pavol teaches wherein an interface shelf oriented horizontally and coupled to the enclosure chassis (104) such that the interface shelf isolates horizontal storage device bays (108) above the interface shelf from storage device bays below the interface shelf (see Fig. 3, the shelves 130, 132 isolate the bays from other bays above or below).

6. With respect to claims 5, 13, and 14, Pavol teaches wherein the mounting surface is configured to receive the first storage device carrier (106) on one side of the mounting surface and the second storage device carrier on an opposite side of the mounting surface (see Fig. 1, clearly teaching that the carriers of the top and bottom row are received on opposite sides of the same mounting surface).

7. With respect to claims 8 and 16, Pavol teaches the storage device (102) is a disk drive (col 3 line 26).

8. With respect to claim 21, the method for reducing vibration is inherent in the structure of Pavol, Pavol teaches providing an enclosure chassis (104) configured to store at least one storage device (102), providing a mounting surface (interior surface of mounting bay 108) oriented vertically (the side walls of the bay are oriented vertically, see Fig. 3) and coupled to the enclosure chassis to form one wall of a drive bay (108), the mounting surface configured for receiving a horizontally oriented storage device carrier (106); providing a first

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layer on the mounting surface (128); providing a second layer on the mounting surface (130, 132); and providing a viscoelastic layer (126) disposed between the first and second layer of the mounting surface for reducing vibration propagation throughout the mounting surface; and providing an interface shelf oriented horizontally and coupled to the enclosure chassis (104) such that the interface shelf isolates horizontal storage device bays (108) above the interface shelf from storage device bays below the interface shelf (see Fig. 3, the shelves 130, 132 isolate the bays from other bays above or below).

9. With respect to claim 24, Pavol teaches an enclosure chassis (104) configured to store at least one storage device (102), a mounting surface (interior surface of mounting bay 108) oriented vertically (the side walls of the bay are oriented vertically, see Fig. 3) and coupled to the enclosure chassis to form one wall of a drive bay (108), the mounting surface configured to receive less than three horizontally oriented a storage device carriers (106, the mounting surface is configured to receive one carrier, which is less than three) and having a damping means (foam laminates comprising of elements 126, 128, and shelves 130, 132) for damping the vibrational energy generated by the storage device and received by the mounting surface.

10. With respect to claim 25, Pavol teaches wherein the damping means comprises a first layer (128), a second layer (130, 132), and a viscoelastic layer (126) between the first layer and the second layer.

11. With respect to claim 27, Pavol teaches a receiving means (col 5 lines 65-66 col 6 lines 1-2) coupled to the mounting surface (interior surface of mounting

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bay 108) for receiving and retaining a storage device carrier (106) perpendicular to the mounting surface (see Fig. 1, 3, the carriers extend in a direction perpendicular from the surface of 128).

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 7, 15, 22, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pavol (PN 6,445,587) in view of Polch et al. (PN 5,858,509). With respect to claim 7 and 15, Pavol teaches the device as applied to claim 1 and 9 above, but lacks a viscoelastic layer disposed in the enclosure chassis. Polch teaches an enclosure (9) for storing at least one storage device (8), comprising a viscoelastic layer (36, 38, 39, 40 are preferably 3M's ISD 112, see col 4 lines 19-20, see also attached reference from 3M's online catalog describing ISD 112 as a viscoelastic polymer) disposed between a first layer (28) and a second layer (26) of the enclosure chassis (see Fig. 2). It would have been obvious to a person of ordinary skill in the computer art to combine the mounting shelf of Polch with the mounting enclosure of Pavol to obtain a drive mounting system for the benefit of increased vibration attenuation.

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3. With respect to claim 22, Pavol teaches the method of claim 21 above, but lacks a viscoelastic layer disposed between the layers of the chassis. The method of reducing vibration is inherent in the structure of Polch, Polch teaches providing a first layer (28) on the enclosure chassis (9); providing a second layer (26) on the enclosure chassis; and providing a viscoelastic layer (36, 38, 39, 40 are preferably 3M's ISD 112, see col 4 lines 19-20, see also attached reference from 3M's online catalog describing ISD 112 as a viscoelastic polymer) disposed between the first and second layer of the enclosure chassis (see Fig. 2), for reducing vibration propagation throughout the enclosure chassis. It would have been obvious to a person of ordinary skill in the computer art to combine the mounting shelf of Polch with the mounting enclosure of Pavol to obtain a drive mounting system for the benefit of increased vibration attenuation.

4. With respect to claim 26, Pavol teaches the device as applied to claim 25 above, but lacks where the viscoelastic layer is a damping adhesive. Polch teaches using an acrylic adhesive layer (see col 4 lines 19-20, see also attached reference from 3M's online catalog describing ISD 112 as a viscoelastic damping polymer). It would have been obvious to a person of ordinary skill in the computer art to use any available suitable material for the viscoelastic layer of Pavol, such as the acrylic adhesive suggested by Polch for the benefit of a damping means that bonds itself to a surface thereby simplifying construction.

5. Claims 10, 17, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pavol (PN 6,445,587) in view of Anderson et al. (PN 6,209,842). With respect to claim 10, Pavol teaches the device as applied to

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claim 9 above, but lacks a clip on spring. Anderson teaches a spring (405, 600) configured to resiliently couple a storage device carrier (400) between the mounting surface (401 and 403) and the receiver (301), the spring having first and second ends configured to engage one of the storage device carrier and the mounting surface (see Fig. 4, one end engages the carrier with fastening means 407 and another end engages the mounting surface 401, 403). Anderson does not specifically teach a clip-on spring, but does state other mounting means may be used (col 4 lines 65-67). It would have been obvious to a person of ordinary skill in the computer art to combine the drive mounting system of Pavol with the laminated damping device of Anderson, utilizing any mounting means well known and old in the art such as a clip-on means, for the benefit of increased protection from vibrations.

6. With respect to claim 17, Anderson teaches wherein the clip-on spring (405, 600) comprises at least three layers (601, 603, 605) including at least one viscoelastic layer (605, see Fig. 6 and col 4 lines 35-36).

7. With respect to claim 23, Pavol teaches the method as applied to claim 21 above, but lacks a clip-on damped spring. The method for reducing vibration is inherent in the structure of Anderson. Anderson teaches providing a storage device carrier (400) for retaining a storage device, securing a receiver (301) to the mounting surface (401 and 403) for receiving the storage device carrier; and coupling at least one damped spring (405, 600) to the storage device carrier, for resiliently coupling the storage device carrier between a receiver formed in the mounting surface and the mounting surface (the carrier is between both the

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receiver and the mounting surfaces, see Fig. 3-5). Anderson does not specifically teach a clip-on spring, but does state other mounting means may be used (col 4 lines 65-67). It would have been obvious to a person of ordinary skill in the computer art to combine the drive mounting system of Pavol with the laminated damping device of Anderson, utilizing any mounting means well known and old in the art such as a clip-on means, for the benefit of increased protection from vibrations.

8. Claims 18 and 28-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pavol (PN 6,445,587) in view of Bell et al. (PN 6,775,142). With respect to claim 18, Pavol teaches an enclosure chassis (104), a mounting surface (interior surface of mounting bay 108 outer surface of 128) oriented vertically (the side walls of the bay are oriented vertically, see Fig. 3) and coupled to the enclosure chassis to form one wall of a drive bay (108), the mounting surface having a first layer (128) and a second layer (130, 132) and a viscoelastic layer (126) disposed between the first layer and the second layer to reduce vibration propagation throughout the mounting surface, the mounting surface configured to receive less than three horizontally oriented storage device carriers (106, the mounting surface is configured to receive one carrier, which is less than three) substantially perpendicular to the mounting surface (see Fig. 1, 3, the carriers extend in a direction perpendicular from the surface of 128); interface shelf oriented horizontally and coupled to the enclosure chassis (104) such that the interface shelf isolates horizontal storage device bays (108) above the interface shelf from storage device bays below the interface shelf (see Fig. 3,

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the shelves 130, 132 isolate the bays from other bays above or below); a storage device carrier (106) including a bezel (114), the storage device carrier configured to retain a storage device (102) therein, the storage device having a storage device carrier interface (138). Pavol lacks a key removably secured on the bezel. Bell teaches a key (24, 21) removably secured to at least one of two positions on the bezel (see Fig. 3), such that placement of the key into one of the two positions prevents the storage device carrier interface from contacting an incompatible interface upon inserting the storage device carrier into the enclosure chassis (see Fig. 3, 9, 10). It would have been obvious to a person of ordinary skill in the computer art to combine the drive vibration attenuation system of Pavol with the key system of Bell to obtain a drive system where the device carriers are selectively keyed to fit selected bays for the benefit of a system that prevents a user from inadvertently matching one device type with an incompatible type and also provides vibration attenuation.

9. With respect to claim 28, Pavol teaches the device as applied to claim 24 above, but lacks a bezel configured to lock the carrier and a keying means. Bell teaches a bezel (front end of 120, see Fig. 3) secured to the storage device carrier (120) and configured to lock the drive carrier within the enclosure (see Fig. 4, a hooking latch is clearly illustrated as part of the bezel, and in Fig. 9 its interface can be clearly seen); and a keying means (124), attached to the bezel (see Fig. 4), for preventing a storage device carrier, with one type of interface, from contacting an incompatible interface upon inserting the storage device carrier into the enclosure chassis (see Fig. 4, 8, 9, 10). It would have been

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obvious to a person or ordinary skill in the art to combine the drive vibration attenuation system of Pavol with the key system of Bell to obtain a drive system where the device carriers are selectively keyed to fit selected bays for the benefit of a system that prevents a user from inadvertently matching one device type with an incompatible type and also provides vibration attenuation.

10. With respect to claim 29, Bell teaches wherein the keying means (124) for keying a storage device carrier (120) comprises a key (24, 21) removably secured to at least one of two positions on the bezel (see Fig. 3), and wherein the placement of the key into one of the two positions prevents the storage device carrier interface from contacting an incompatible interface upon inserting the storage device carrier into the enclosure chassis (see Fig. 4, 8, 9, 10).

11. With respect to claim 30, Bell teaches wherein the keying means for keying a storage device carrier comprises a groove in the enclosure chassis configured to receive the key (see Fig. 5, the key plate 135 may comprise grooves for accepting the keys 24, 21).

12. Claims 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pavol (PN 6,445,587) in view of Bell at al. (PN 6,775,142) as applied to claim 18 above, and further in view of Anderson at al. (PN 6,209,842).

With respect to claim 19, Pavol as modified by Bell lacks a clip-on spring.

Anderson teaches at least one spring (405, 600) coupled to the storage device carrier (400), the spring configured to flexibly couple the storage device carrier to the mounting surface (401, 403, see Fig. 4), the spring having first and second ends configured to engage one of the storage device carrier and the mounting

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surface (see Fig. 4, one end engages the carrier with fastening means 407 and another end engages the mounting surface 401, 403). Anderson does not specifically teach a clip-on spring, but does state other mounting means may be used (col 4 lines 65-67). It would have been obvious to a person of ordinary skill in the computer art to combine the keyed drive mounting system of Pavol as modified by Bell with the laminated damping device of Anderson, utilizing any mounting means well known and old in the art such as a clip-on means, for the benefit of increased protection from vibrations.

13. With respect to claim 20, Anderson teaches wherein the clip-on spring (405, 600) comprises at least three layers (601, 603, 605) including at least one viscoelastic layer (605, see Fig. 6 and col 4 lines 35-36).

Response to Arguments

14. Applicant's arguments filed 5/20/2005 have been fully considered but they are not persuasive. With respect to the arguments that Pavol is insufficient to anticipate claim 1, the word receiver is taken to mean "something that receives". Therefore the portion of the surface of layer 126 that contacts and retains the drive carrier 106 in the bay 108 fits the concept of a "receiver". This receiver is located on the vertical walls 136. The Applicant alleges in his arguments that a receiver is a specific mechanical structure, but such a specific structure is not claimed. It is the claims that define the claimed invention, and it is the claims, not the specifications or arguments that are anticipated or found unpatentable. The Examiner applies Pavol to the claims above as amended showing that Pavol

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does teaches the vertical orientation mounting surface as claimed. The Examiner also notes that changing the orientation of a rectangular device to change the footprint and height attributes of the device is inherent in rectangular devices. It is an expected result, and expected results are an indicator of obviousness. See the rejection of the claims above in response to the similar arguments pertaining to claims 9, 18, 21, and 24 and their dependant claims.

15. With respect to the arguments that Pavol in view of Bell fails to teach the claims as amended, the Examiner respectfully disagrees. The Applicant alleges that the claims limit the key to only be located on the front handle portion. The Applicant may act as his own lexicographer, but must clearly set forth a definition of the term that is different from its ordinary and customary meaning. The Applicant's disclosure lacks any special definition for the term "bezel". Also in the Examiner's interpretation of the claims, the claims do not limit the bezel to only being the front handle portion, and the claim language allows other features connected to and grouped with the front handle to be fairly characterized as a "bezel". Therefore the Examiner maintains the obvious rejection of Pavol in view of Bell.

16. With respect to the argument that Pavol in view of Anderson is insufficient to rejection the claimed "clip-on spring", the Examiner calls attention to the previous office action noting the suggestion of Anderson to use other mounting means for the spring, and also the Examiner noted that a clip-on means for mounting was old and well known. If Applicant does not seasonably traverse the well known statement during the examination, then the object of the well known

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statement is taken to be admitted prior art. In re Chevenard, 139 F.2nd 71, 60 USPQ 239 (CCPA 1943). The applicant failed to seasonably challenge the well known statement by demanding for evidence as soon as it was practicable during prosecution. Therefore the Examiner believes that the prior art of record is sufficient to support the obviousness rejection and the Examiner maintains said rejection.

Conclusion

17. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Corey M. Broussard whose telephone number is 571 272 2799. The examiner can normally be reached on 7:30-5 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn Feild can be reached on 571 272 2092. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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PRIMARY EXAMINER